CHARACTERIZATION OF CHILDHOOD ASTHMA IN BARBADOS FROM A PILOT STUDY OF ENVIRONMENTAL RISK FACTORS

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Background and Aims: Recent global climate changes have been accompanied by an increase in asthma prevalence in Barbados, particularly among children. While changes in air quality and lifestyle likely contribute to disease burden, there is little published data about the asthma health of this population. We characterized the respiratory health of children with asthma in Barbados with the aim of relating their morbidity to potential environmental risks.
Methods: Twenty-six children with physician-diagnosed asthma were enrolled in a study investigating the impact of air quality on asthma health. Validated questionnaires (adapted from pediatric ATAQ, CHSA, PAQLQ) to measure asthma control, asthma-specific health status and quality of life were administered. Daily activity and symptom diaries were also completed.
Results: The mean age of subjects was 10 years (range 5-16) and the majority were boys (20/26). Although most children were on controller therapy with inhaled corticosteroids (23/26), subjects reported a median of 2.5 days (IQR 0-6) of respiratory symptoms (wheeze, cough, chest tightness), and 2.0 nights (IQR 1-2) of symptoms in the last 2 weeks. Symptoms of cough, in the absence of a cold, occurred for 2 out of 14 days. In this cohort, health care utilization was predominated by acute care facilities, with 46% reporting A&E visits and 39% needing overnight hospitalizations in a 3 month period; in contrast, only 15% sought care at a physician's office. Children were found to spend most of their day indoors; however second-hand smoke exposure was noted to be very rare.
Conclusions: Barbadian children suffer significant morbidity from their asthma, requiring frequent visits to acute care facilities, despite the use of controller medications. Future work is needed to identify triggers in the indoor and outdoor environments that could contribute to high disease burden and ways to shift acute care visits to the primary care setting.
References: Howitt ME RTNR: Prevalence of childhood asthma and wheezing illness in Barbadian school children: the Barbados national asthma and allergy study. *Am J Respir Crit Care Med* 1997;157

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